each bundle consists of a V-shaped mass of tracheary tissue, including spiral, reticulated and pitted vessels, the last mentioned occupying the upper parts of the arms of the V, others lying towards its point. The cavity of the V, which looks toward the periphery of the stem, contains a poorly developed sieve tissue. Small-celled parenchyma on its peripheral and lateral surfaces, and a varying amount of fibrous tissue, mostly in connection with the tracheary tissue, complete the structural elements of the bundle.

In the meristem layer mentioned above, new bundles arise, and thus increase the stem in a sort of exogenous manner, as is done in the Dragon trees and other tree-Liliaceæ. This feature alone in the structure of the Asparagus stem makes it an exceedingly valuable one for study, as bundles of all ages may readily be obtained in the same section.

In the stem at the base of each leaf, those ascending bundles which are connected with the fibro-vascular system of the leaf, divide into four branches, two of which continue upward through the stem, while two pass outward into the leaf. In each bundle, the ascending cauline portions unite right and left with corresponding portions of the adjacent bundles, while in a similar manner those which pass into the leaf unite right and left, and form the principal leaf veins. The bundles in the stem which connect with the fibro-vascular system of the lateral stems (branches) divide at the baseof the latter into two parts, which unite right and left and thus form the bundles of the lateral stem. A few of the branch-bundles have a deep connection in the stem with bundles which have also an upward cauline extension.

It must not be forgotten that the leaves of the Asparagus are quite small, flat, triangular, bract-like structures, and that the needle-shaped bodies which constitute the so-called leaves, are in reality short, leafless, lateral stems.—C. E. Bessey, *Ames, Iowa.*

An Interesting Fernery.—My attention having been called to some ferns growing in the crevices of the north wall of the old Mass. State Prison in Charlestown, (no longer used as a prison) by Mr. C. E. Perkins of Somerville, on examination I found four species which I have identified as *Asplenium Filix-fœmina, Dicksonia pilosiuscula, Aspidium Thelypteris* and a form of *Aspidium spinulosum.*

The plants, with the exception of one growing high up beyond my reach, but the fronds of which I afterward obtained with the aid of a long pole and found to be a well fruited specimen of *A. Filix-fœmina*, were, as might be expected in such a situation, merely depauperate forms and mostly sterile.

I collected a few fertile fronds of *A. Filix-fœmina* that might very well pass for "*var. exile,*" some of them not more than 4 or 5 inches tall and sparing, one or two quite well pointed.

The other species were all sterile, and the specimens, except those of *A. spinulosum*, were not at first clearly distinguishable being small and considerably changed in appearance by growing in such uncomfortably cramped quarters.

As none of these ferns, nor any others for that matter so far as I know, grow anywhere near the Prison grounds naturally, their presence in such an unnatural situation is not easily accounted for, but it is to be presumed that the spores were blown from a distance by high winds and lodged in the crevices where they subsequently found sufficent moisture and shelter to favor their germination.

The territory immediately surrounding this portion of the Prison wall at present (originally partly surrounded by water) is made of low filled land partially covered with coarse plants, which I had no time to examine, but conspicuous among which, and abundant, was *Senecio vulgaris*, and, judging from the number of burrs attached to my clothing when I came off the ground, *Lappa officinalis*.

The ground still retains much of its original dampness, and this, together with the condensation of escaping steam from the manufactory adjoining the wall within the Prison yard, assists the heavy granite wall in condensing and holding moisture enough to sustain quite a vegetable colony, other plants besides ferns being found there.

Some of the upper cracks had become sufficiently widened by the crumbling away of the mortar to effectually hide and protect the sparrows that flew in and out above my head, and this may have led one near by to suggest that the *seeds of the ferns had probably been carried there by the birds*!

The rootstocks of *A. Thelypteris* and *Dicksonia* had receded to quite a depth, while the crowns of the others were about even with the wall.

I brought away a few plants that I succeeded, with some difficulty, in getting out of the cracks, and also *Marchantia polymorpha* that was growing with them, and these I have set out in a moist ravine where I can watch their future development under more natural conditions.

Mr. Perkins, who has botanized quite extensively about waste grounds, and is familiar with all such places in this vicinity, writes me that he saw one season a large fern clump growing on one of the wharves in the Charlestown Navy Yard partly under the beams, and mentions s me ice-houses with ferns growing from the cracks between the boards, but the latter are in close proximity to fronds whose ferns abound naturally.—GEO. E DAVENPORT.

Some New Grasses.—MELICA HALLII, n. sp.,—Culms wiry, erect, 1½ to 2 feet high. Leaves all involute, setaceous, scabrous; the radical numerous, 5 to 12 inches long, those of the culm (about two) 1 to 1½ inches long, ligule obsolete. Panicle narrow, 2 to 3 inches long, the branches solitary or in pairs, the longest 1½ to 2 inches, the 3 to 5 spikelets borne above the middle. Spikelets 3 to 4 lines long, two-flowered with a distinct rudiment of a third; outer or empty glumes membranaceous, equalling the flower, lanceolate, acute, the upper a little the longer, midvein prominent, the lateral nerves soon evanescent or wholly wanting; flowering glumes and palets chartaceous, finely scabrous, about equal, the flowering glume 3–5-